

Donald Abelson  
Chief of the International Bureau  
Federal Communications Commission  
445 12th Street SW  
Washington, D.C. 20554

Dear Mr. Abelson:

The National Telecommunications and Information Administration on behalf of the Executive Branch Agencies, has approved the release of five additional Preliminary Executive Branch [NTIA] Views considering federal agency inputs toward the development of U.S. Preliminary Views for WRC-2003. These preliminary views address WRC-2003 agenda items 1.8.1, 1.8.2, 1.16, 1.27, and 1.35. The preliminary view for agenda item 1.8.2 only contains background information at this time. We will develop the "U.S. View" section for this preliminary view and provide it at a later time. The enclosure is forwarded for review by your WRC-2003 Advisory Committee. Karl Nebbia from my staff will contact Julie Garcia and reconcile any differences.

Sincerely,

*(Original Signed March 27, 2001)*  
William T. Hatch  
Associate Administrator  
Office of Spectrum Management

Enclosure

***Radio Conference Subcommittee (RCS)***  
Preparation for ITU Radiocommunication Conferences

**DRAFT PRELIMINARY VIEW FOR WRC-03**

**WRC-2003 Agenda Item 1.8.1:** consideration of the results of studies regarding the boundary between spurious and out-of-band emissions, with a view to including the boundary in Appendix **S3**;

**ISSUE:** Boundary Between the Out-of-Band and Spurious Domains

**BACKGROUND:** While the intent of the unwanted emission limits in Appendix **S3** is that they would apply to spurious emissions, it is not generally feasible to distinguish between out-of-band and spurious emissions as defined by Article **S1**. Therefore, the limits are applied to all unwanted emissions further removed from the center frequency than a specified *boundary*. This boundary is generally 250% of the necessary bandwidth.

Task Group 1/5 recognized that, since spurious emissions can occur anywhere outside the necessary bandwidth of an emission, no boundary actually exists between out-of-band and spurious emissions. TG 1/5 solved this problem by defining the out-of-band and spurious *domains*, disjoint frequency ranges specified such that out-of-band or spurious emissions generally predominate within them.

**U.S. VIEW:** The United States supports adoption of the definitions of the out-of-band and spurious domains in Article **S1** of the *Radio Regulations*, since they are required to remove contradictions in the terminology used to describe unwanted emission limits. The United States supports the use of the boundary values developed in Task Group 1/5 to update Appendix **S3**. (8 March 2001)

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***Radio Conference Subcommittee (RCS)***  
Preparation for ITU Radiocommunication Conferences

**DRAFT PRELIMINARY VIEW FOR WRC-03**

**WRC-2003 Agenda Item 1.8.2:** consideration of the results of studies, and proposal of any regulatory measures regarding the protection of passive services from unwanted emissions, in particular from space service transmissions, in response to recommends 5 and 6 of Recommendation 66 (Rev.WRC-2000);

**ISSUE:** Protection of Passive Services

**BACKGROUND:** Because of their highly sensitive receivers, needed to detect weak signals from sources that are usually beyond their control, passive systems in the radio astronomy, Earth exploration-satellite, and space research services are particularly susceptible to radio frequency interference.

For years the ITU-R has sought a solution to the problem of unwanted emission interference to passive systems, especially from satellites. Measures taken by passive systems to avoid interference may restrict the operation of the passive systems and thereby reduce their value. On the other hand, filtering of satellite emissions in the passive service bands may be costly or impractical.

This issue is currently the subject of Task Group 1/7, established in November 2000. Recent work on this issue by Task Group 1/5 led to “band-by-band” studies to quantify the problem and explore possible solutions. Progress in TG 1/7 on this issue will require *very* creative ideas and perhaps a willingness on the part of space and passive interests to compromise.

**U.S. VIEW:** (8 March 2001)

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***Radio Conference Subcommittee (RCS)***

Preparation for ITU Radiocommunication Conferences

**DRAFT PRELIMINARY VIEWS ON WRC-03**

**WRC-2003 Agenda Item 1.16:** to consider allocations on a worldwide basis for feeder links in bands around 1.4 GHz to the non-GSO MSS with service links operating below 1 GHz, taking into account the results of ITU-R studies conducted in response to Resolution **127 (Rev.WRC-2000)**, provided that due recognition is given to the passive services, taking into account No. **S5.340**;

**ISSUE:** Additional allocations for feeder links for little LEO's in the neighborhood of 1.4 GHz, in particular in the bands 1 390-1 393 MHz and 1 429-1 432 MHz for non-GSO MSS feeder uplink and downlink, respectively, while sharing with the services now operating in the band, and with no impact on the passive services (radio astronomy and remote sensing) operating in the neighboring 1 400-1 427 MHz band.

**BACKGROUND:** Service allocations to the little LEO MSS were first made at WARC-92. Since 1995, additional allocations were sought by the little LEOs for feeder links, but to date this requirement has not been satisfied. **Resolution 127 (WRC-97)** identified the bands 1 390-1 400 MHz and 1427-1432 MHz for studies to accommodate the up and downlinks, respectively, provided sharing with services using these bands was feasible and that the passive services operating in the 1 400-1 427 MHz band can be fully protected. Subsequent to WRC-97, little LEO requirements have been restricted to the 1 390-1 393 MHz and 1 429-1 432 MHz bands, for up and downlinks, respectively, and this is reflected in **Resolution 127 (Rev. WRC-00)**. Work in SG 7 started, towards showing that under certain conditions the planned little LEO feeder links could meet the unwanted emission level required in the band 1 400-1 427 MHz for no impact on the operation of the passive services in the 1 400-1 427 MHz band. This work has not yet been concluded.

The 1 400-1 427 MHz band is allocated on a primary, exclusive basis to the passive services, worldwide. This is arguably the most important, and certainly the most frequently and extensively observed radio astronomy band below 70 GHz. Observations in the band are conducted at a large number of sites in the U.S. and worldwide, to study the distribution, kinematics and dynamics of neutral hydrogen (the most commonly occurring element in the Universe) in our own as well as in other galaxies. Ocean and soil salinity and other measurements are conducted in the band under the EESS allocation. Full retention and unconstrained access to the 1 400-1 427 MHz band is considered essential by both the radio astronomy and EESS communities. The radio astronomy and remote sensing communities are worried about the possible impact that unwanted emissions from satellite and terrestrial stations may have on observations carried out in the 1 400-1 427 MHz passive band.

**U.S. VIEW:** The U.S. cannot support 1.4 GHz non-GSO FSS uplink and downlink allocations unless it is conclusively demonstrated, including measurement of emissions that would be employed in operational systems, that unwanted emissions into the 1 400-1 427 MHz band can be kept below the detrimental interference levels in **ITU-R RA.769-1** (mainly with respect to space-to-Earth links) and in **ITU-R SA.1029-1** (mainly with respect to Earth-to-space links) for

this band. Studies are now going on in the ITU-R to that effect. U.S. support for allocations to non-GSO MSS feeder links in the 1 390-1 393 MHz and 1 429-1 432 MHz band is contingent upon: 1) successful conclusion of the ITU-R studies, and 2) fully assured regulatory protection of the passive services in the 1 400-1 427 MHz from out-of-band emissions of non-GSO uplinks that may operate in the 1 390-1 393 MHz band and downlinks that may operate in 1 429-1 432 MHz band. (March 15, 2001)

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***Radio Conference Subcommittee (RCS)***  
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**DRAFT PRELIMINARY VIEW FOR WRC-03**

**WRC-2003 Agenda Item 1.27:** to review, in accordance with Resolutions [GT PLEN-1/1] (WRC-2000) and [GT PLEN-1/3] (WRC-2000), the ITU-R studies requested in those resolutions, and modify, as appropriate, the relevant regulatory procedures and associated sharing criteria contained in Appendices S30 and S30A and in the associated provisions;

**ISSUE:** Studies are required to revise certain procedures and sharing criteria as a consequence of decisions taken at WRC-2000 with respect to the bands around 12 GHz (and the feeder links associated with them) for satellite and terrestrial services.

**BACKGROUND:** WRC-2000 made significant changes in the use of those bands allocated to the BSS from 11.7 to 12.5 GHz, largely due to the major replanning modifications to the Regions 1 and 3 BSS Plans (S30) and the feeder links (roughly 17.3 to 17.8 GHz (S30A)).

In particular, there is a consequential need to determine sharing criteria and sharing procedures between receiving earth stations in the BSS (consumer downlink dishes, for example) and transmitting earth stations and terrestrial stations in these bands for the other services using these frequencies (BSS, FSS and FS).

Additionally, interregional and inter-service pfd limits were agreed upon at WRC-2000 for Regions 1 & 3 BSS into Region 2 FSS, Region 1 BSS into Region 3 FSS and Region 2 BSS into Regions 1 & 3 FSS downlinks under the proviso that these situations would be studied further. The results of these sharing studies on pfd limits would be reported to WRC-03.

Presumably, final quantitative values will be established at WRC-03, and placed in the appropriate parts of Appendices S30 and S30A.

**U.S. VIEW:** The U.S. will require that final sharing criteria and sharing procedures determined at WRC-03 between the various affected Services and Regions does not adversely affect any Region 2 network's performance. Furthermore, since there are U.S. based providers with network entries in the unplanned list for Regions 1 and 3 delivery, the sharing criteria associated solely within these two Regions should not adversely affect any unplanned elements of the overall composition of satellite networks for these delivery and feeder link bands. (March 15, 2001)

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***Radio Conference Subcommittee (RCS)***  
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**DRAFT PRELIMINARY VIEW FOR WRC-03**

**WRC-2003 Agenda Item 1.35:** to consider the report of the Director of the Radiocommunication Bureau on the results of the analysis in accordance with Resolution **53 (Rev. WRC-2000)** and take appropriate action;

**ISSUE:** The BR is responsible for analysis that will update the “remarks” column of tables in Article 9A of Appendix S30A and Article 11 of Appendix S30.

**BACKGROUND:** Article 11 of Appendix S30 contains the specifics of the Regions 1 & 3 Plans in a table containing 17 columns. A similar table with 19 columns deals with the feeder links (Appendix S30A). These two tables are the essence of the Plans.

The last column in each table is called “remarks”. There is a numerical code for the “remarks” column – 8 possibilities for a downlink and 9 for a feeder link. A “remark” example is “This assignment shall not claim protection from ...” Most assignments do not have an entry in the “remarks” column in the old Plan (see WRC-97).

WRC-2000 made a total overhaul of the Regions 1 and 3 Plans by in general doubling the number of assignments in each Plan per administration. The BR was responsible for conducting an enormous amount of work during the Conference to meet a deadline not long before the end of the Conference so that the Plans could be accepted by the Conference in Plenary at the end.

The “remarks” column needs to be completed by the BR, first as a draft to be circulated to administrations. After this review process, the BR is instructed to present the agreed upon “remark” inclusions in the tables for review and possible action at WRC-03.

**U.S. VIEW:** The U.S. agrees with the need to update the “remarks” column of Article 9A of Appendix S30A and of Article 11 of Appendix S30 consistent with the decisions made at WRC-2000 on the replanning of the BSS for Regions 1 and 3. (March 15, 2001)

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